



# **“Revenge of the Sheets” Learn to Google Sheets the Jedi Way!**

Before We Begin...



HELLO!



Google™ Apps for Education



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**[bit.ly/jesseresources](https://bit.ly/jesseresources)**





## This Session...

### Title

# **“Revenge of the Sheets” Learn to Google Sheets the Jedi Way!**

### Description

The long-awaited sequel to [“May the Forms Be With You”](#), this session will enable educators to wield the full power of Google Sheets. We will explore various spreadsheet techniques, Add-Ons (like Doctopus), as well as Google Forms and Google Classroom integration strategies that will help turn even the most basic spreadsheet users into full-fledged Google Sheets Jedi Masters!



Full



This presentation contains excessive references to the film Star Wars and its affiliated sequels and prequels. While this session contains information designed to strengthen your knowledge of Google Sheets and empower you with new tools to use in your classrooms, those not strong with the Force may find themselves susceptible to the influence of the Dark Side.

## A Long Time Ago...

### MESSAGE TO CHANGING THE SHEETS

IT IS A LONG TIME AGO, somewhere  
amongst many stars, there is  
a small planet in the  
distance. The full potential of  
the technology they have been  
collecting has yet to have been  
realized.

A group of stellar educators  
have appealed to the Jedi High  
Council to begin exploring how  
Google Sheets can help schools  
to reach the next tier of success.

*Today, assisted by the power of  
the Force, those educators will  
look upon lessons from both the  
Jedi and Sith in order to harness  
the power of Sheets and become  
Google Sheets Jedi Masters!*

# Google Sheets Jedi Academy

Welcome  
to the  
Google  
Sheets  
Jedi  
Academy!



Will you  
succeed  
and  
become a  
Jedi or  
join the  
Dark  
Side?

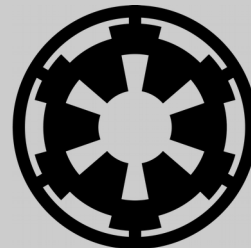
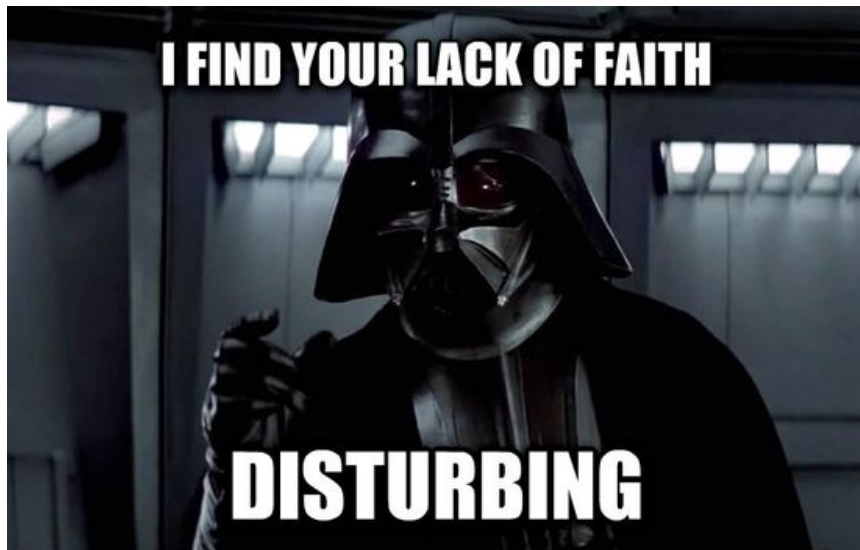


**Before We Get Started...**



# Getting Our Hands Dirty

## [Practice Google Sheet](#)




When you see the Empire logo in the upper left corner of a slide, it means there is a practice tab in the Practice Google Sheet for that topic.

# Sheets

## Vocabulary

Let's review some important Google Sheets terms...


Example Google Sheet ☆  jlubinsky@gmail.com

File Edit View Insert Format Data Tools Add-ons Help Last edit was yesterday at 5:16 PM

Comments [Share](#)

fx Name

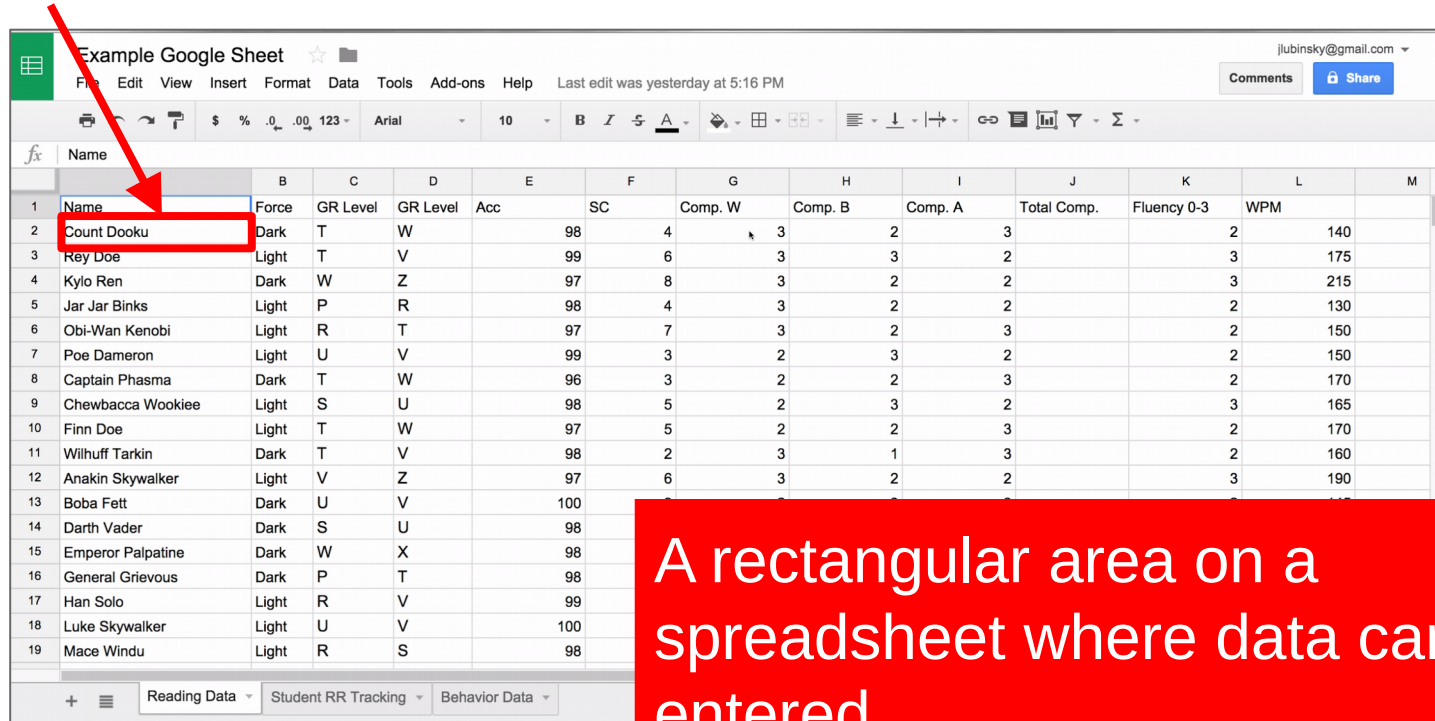
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Name	Force	GR Level	GR Level	Acc	SC	Comp. W	Comp. B	Comp. A	Total Comp.	Fluency 0-3	WPM	
2	Count Dooku	Dark	T	W	98	4	3	2	3		2	140	
3	Rey Doe	Light	T	V	99	6	3	3	2		3	175	
4	Kylo Ren	Dark	W	Z	97	8	3	2	2		3	215	
5	Jar Jar Binks	Light	P	R	98	4	3	2	2		2	130	
6	Obi-Wan Kenobi	Light	R	T	97	7	3	2	3		2	150	
7	Poe Dameron	Light	U	V	99	3	2	3	2		2	150	
8	Captain Phasma	Dark	T	W	96	3	2	2	3		2	170	
9	Chewbacca Wookiee	Light	S	U	98	5	2	3	2		3	165	
10	Finn Doe	Light	T	W	97	5	2	2	3		2	170	
11	Wilhuff Tarkin	Dark	T	V	98	2	3	1	3		2	160	
12	Anakin Skywalker	Light	V	Z	97	6	3	2	2		3	190	
13	Boba Fett	Dark	U	V	100	9	2	3	3		2	145	
14	Darth Vader	Dark	S	U	98	7	3	3	3		1	140	
15	Emperor Palpatine	Dark	W	X	98	7	3	2	2		2	180	
16	General Grievous	Dark	P	T	98	8	2	3	2		3	170	
17	Han Solo	Light	R	V	99	8	3	2	3		3	170	
18	Luke Skywalker	Light	U	V	100	5	3	3	2		3	175	
19	Mace Windu	Light	R	S	98	3	3	3	2		3	155	

+  Reading Data ▾ Student RR Tracking ▾ Behavior Data ▾ [Explore](#)



# Sheets Vocabulary

# Cell



Example Google Sheet

File Edit View Insert Format Data Tools Add-ons Help Last edit was yesterday at 5:16 PM

Comments Share

	Name	B	C	D	E	F	G	H	I	J	K	L	M
1	Name	Force	GR Level	GR Level	Acc	SC	Comp. W	Comp. B	Comp. A	Total Comp.	Fluency 0-3	WPM	
2	Count Dooku	Dark	T	W	98	4	3	2	3		2	140	
3	Rey Doe	Light	T	V	99	6	3	3	2		3	175	
4	Kylo Ren	Dark	W	Z	97	8	3	2	2		3	215	
5	Jar Jar Blinks	Light	P	R	98	4	3	2	2		2	130	
6	Obi-Wan Kenobi	Light	R	T	97	7	3	2	3		2	150	
7	Poe Dameron	Light	U	V	99	3	2	3	2		2	150	
8	Captain Phasma	Dark	T	W	96	3	2	2	3		2	170	
9	Chewbacca Wookiee	Light	S	U	98	5	2	3	2		3	165	
10	Finn Doe	Light	T	W	97	5	2	2	3		2	170	
11	Wilhuff Tarkin	Dark	T	V	98	2	3	1	3		2	160	
12	Anakin Skywalker	Light	V	Z	97	6	3	2	2		3	190	
13	Boba Fett	Dark	U	V	100								
14	Darth Vader	Dark	S	U	98								
15	Emperor Palpatine	Dark	W	X	98								
16	General Grievous	Dark	P	T	98								
17	Han Solo	Light	R	V	99								
18	Luke Skywalker	Light	U	V	100								
19	Mace Windu	Light	R	S	98								

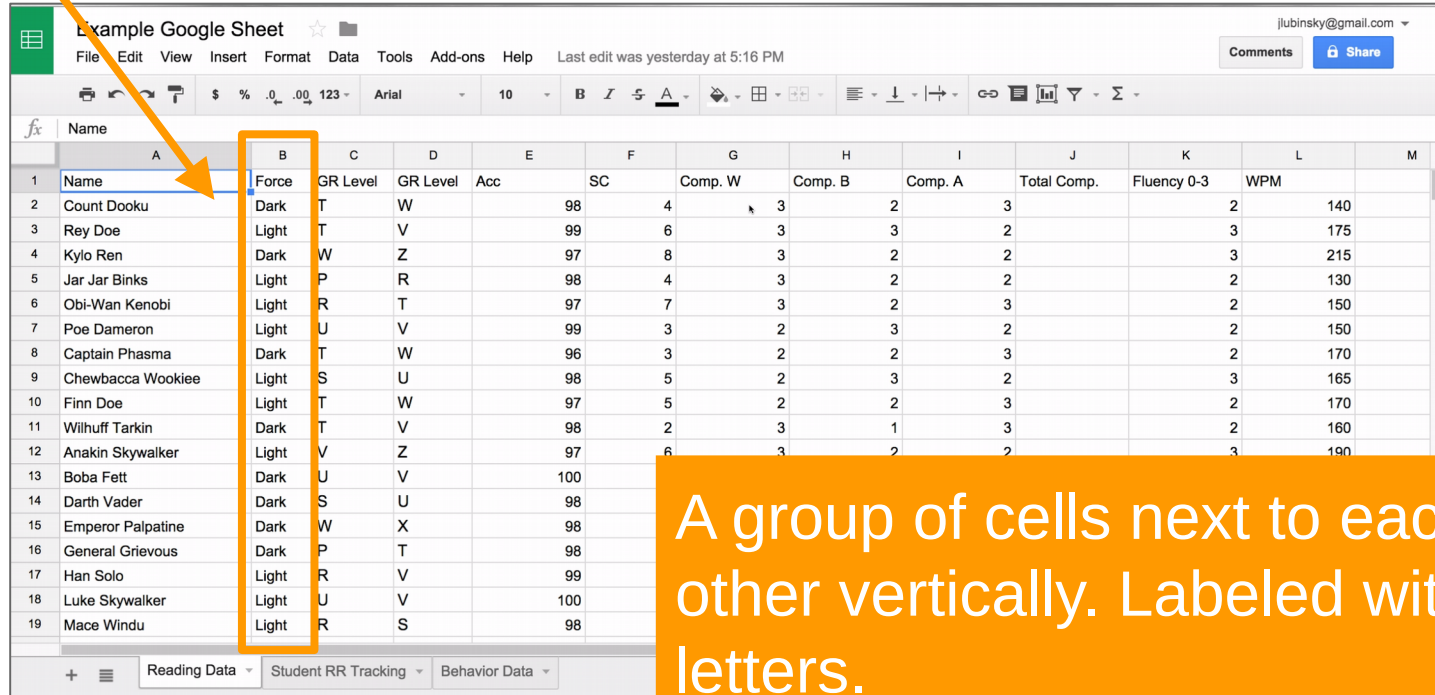
Reading Data Student RR Tracking Behavior Data

A rectangular area on a spreadsheet where data can be entered.



# Sheets Vocabulary

## Column



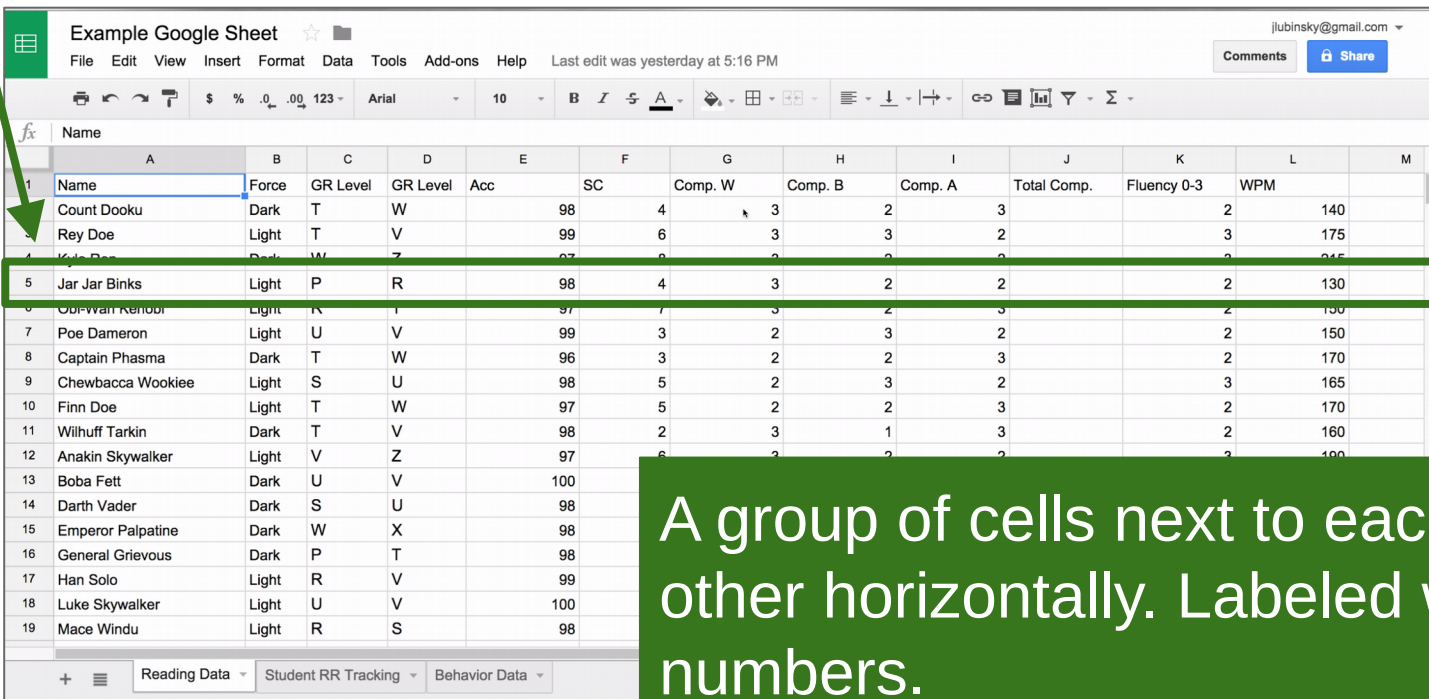
The screenshot shows a Google Sheet interface. The title bar reads 'Example Google Sheet'. The menu bar includes File, Edit, View, Insert, Format, Data, Tools, Add-ons, and Help. The status bar indicates 'Last edit was yesterday at 5:16 PM'. The toolbar shows various formatting and editing tools. The spreadsheet has columns labeled A through M. Column B is highlighted with an orange box, and an orange arrow points to it from the word 'Column' in the top left. The data in the spreadsheet is as follows:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Name	Force	GR Level	GR Level	Acc	SC	Comp. W	Comp. B	Comp. A	Total Comp.	Fluency 0-3	WPM	
2	Count Dooku	Dark	T	W	98	4	3	2	3		2	140	
3	Rey Doe	Light	T	V	99	6	3	3	2		3	175	
4	Kylo Ren	Dark	W	Z	97	8	3	2	2		3	215	
5	Jar Jar Binks	Light	P	R	98	4	3	2	2		2	130	
6	Obi-Wan Kenobi	Light	R	T	97	7	3	2	3		2	150	
7	Poe Dameron	Light	U	V	99	3	2	3	2		2	150	
8	Captain Phasma	Dark	T	W	96	3	2	2	3		2	170	
9	Chewbacca Wookiee	Light	S	U	98	5	2	3	2		3	165	
10	Finn Doe	Light	T	W	97	5	2	2	3		2	170	
11	Wilhuff Tarkin	Dark	T	V	98	2	3	1	3		2	160	
12	Anakin Skywalker	Light	V	Z	97	6	3	2	2		3	190	
13	Boba Fett	Dark	U	V	100								
14	Darth Vader	Dark	S	U	98								
15	Emperor Palpatine	Dark	W	X	98								
16	General Grievous	Dark	P	T	98								
17	Han Solo	Light	R	V	99								
18	Luke Skywalker	Light	U	V	100								
19	Mace Windu	Light	R	S	98								

A group of cells next to each other vertically. Labeled with letters.

# Sheets Vocabulary

## Row



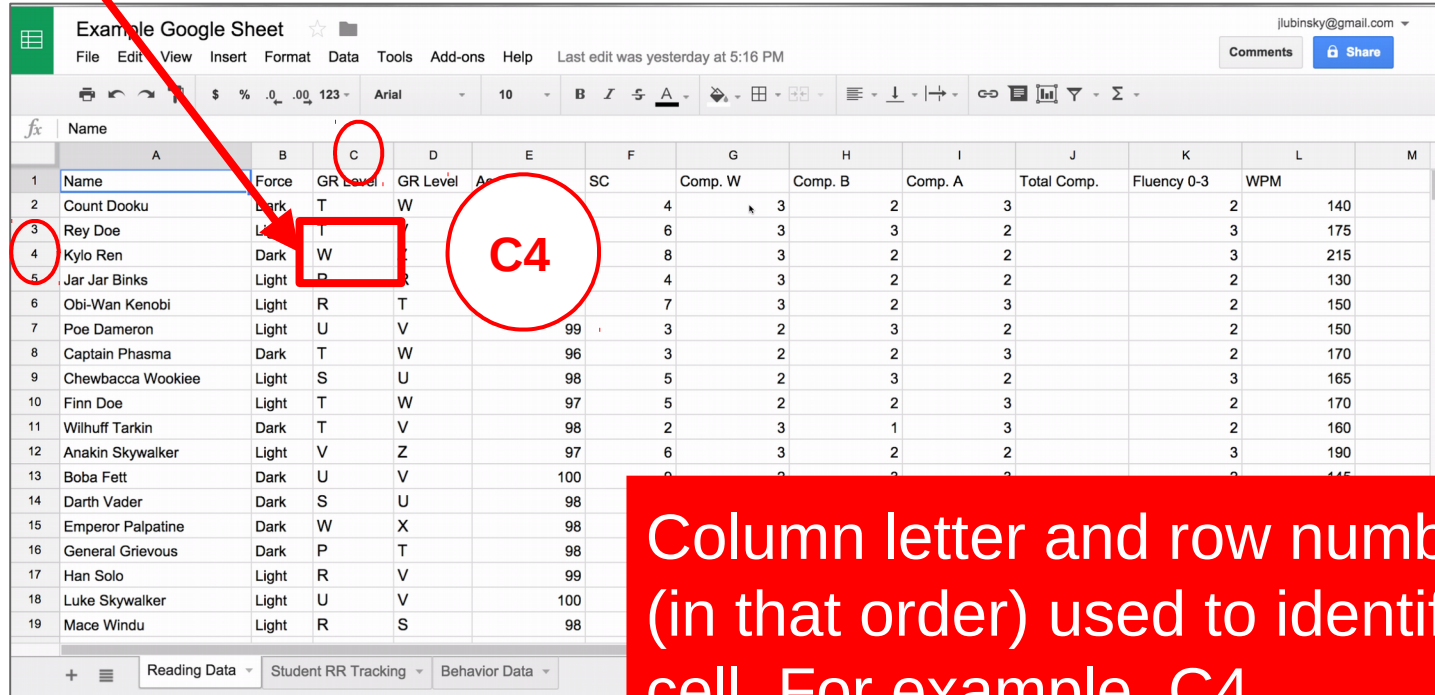
The screenshot shows a Google Sheet interface with a table containing 19 rows of data. The first row is highlighted with a green box, and a green arrow points to it from the word 'Row' in the top left. The table has columns labeled A through M. The data is as follows:

Name	Force	GR Level	GR Level	Acc	SC	Comp. W	Comp. B	Comp. A	Total Comp.	Fluency 0-3	WPM
Count Dooku	Dark	T	W	98	4	3	2	3		2	140
Rey Doe	Light	T	V	99	6	3	3	2		3	175
Jar Jar Binks	Light	P	R	98	4	3	2	2		2	130
Obi-Wan Kenobi	Light	K	T	97	7	3	2	3		2	150
Poe Dameron	Light	U	V	99	3	2	3	2		2	150
Captain Phasma	Dark	T	W	96	3	2	2	3		2	170
Chewbacca Wookiee	Light	S	U	98	5	2	3	2		3	165
Finn Doe	Light	T	W	97	5	2	2	3		2	170
Wilhuff Tarkin	Dark	T	V	98	2	3	1	3		2	160
Anakin Skywalker	Light	V	Z	97	6	2	2	2		2	100
Boba Fett	Dark	U	V	100							
Darth Vader	Dark	S	U	98							
Emperor Palpatine	Dark	W	X	98							
General Grievous	Dark	P	T	98							
Han Solo	Light	R	V	99							
Luke Skywalker	Light	U	V	100							
Mace Windu	Light	R	S	98							

A group of cells next to each other horizontally. Labeled with numbers.

# Sheets Vocabulary

## Cell Name



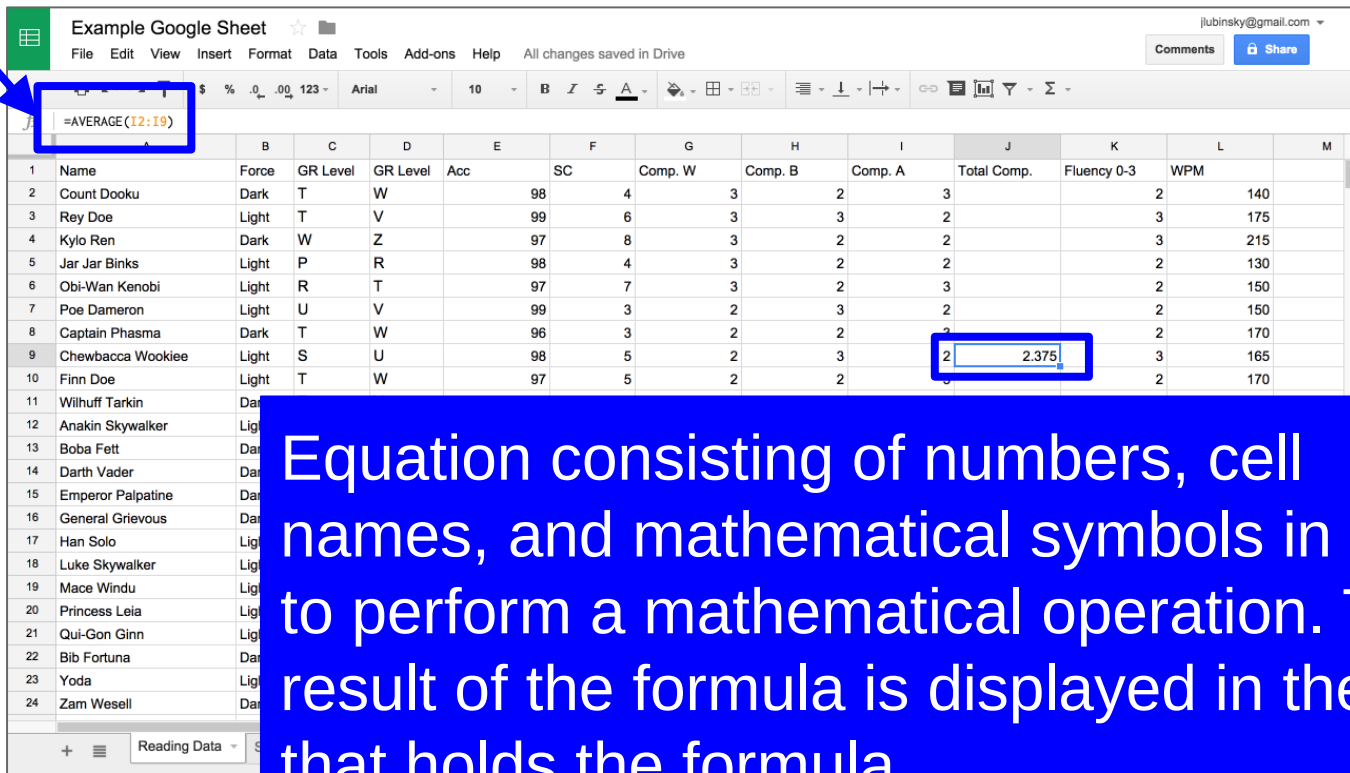
The screenshot shows a Google Sheet with the following data:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Name	Force	GR Level	GR Level	Ass	SC	Comp. W	Comp. B	Comp. A	Total Comp.	Fluency 0-3	WPM	
2	Count Dooku	Dark	T	W		4	3	2	3		2	140	
3	Rey Doe	Light	T	W		6	3	3	2		3	175	
4	Kylo Ren	Dark	W			8	3	2	2		3	215	
5	Jar Jar Binks	Light	D	R		4	3	2	2		2	130	
6	Obi-Wan Kenobi	Light	R	T		7	3	2	3		2	150	
7	Poe Dameron	Light	U	V		99	3	2	3		2	150	
8	Captain Phasma	Dark	T	W		96	3	2	3		2	170	
9	Chewbacca Wookiee	Light	S	U		98	5	2	3		3	165	
10	Finn Doe	Light	T	W		97	5	2	3		2	170	
11	Wilhuff Tarkin	Dark	T	V		98	2	3	1		3	160	
12	Anakin Skywalker	Light	V	Z		97	6	3	2		3	190	
13	Boba Fett	Dark	U	V		100	0	0	0		0	115	
14	Darth Vader	Dark	S	U		98							
15	Emperor Palpatine	Dark	W	X		98							
16	General Grievous	Dark	P	T		98							
17	Han Solo	Light	R	V		99							
18	Luke Skywalker	Light	U	V		100							
19	Mace Windu	Light	R	S		98							

Column letter and row number (in that order) used to identify a cell. For example, C4.

# Formula

## Sheets Vocabulary



Example Google Sheet

File Edit View Insert Format Data Tools Add-ons Help All changes saved in Drive

Comments Share

`=AVERAGE(I2:I9)`

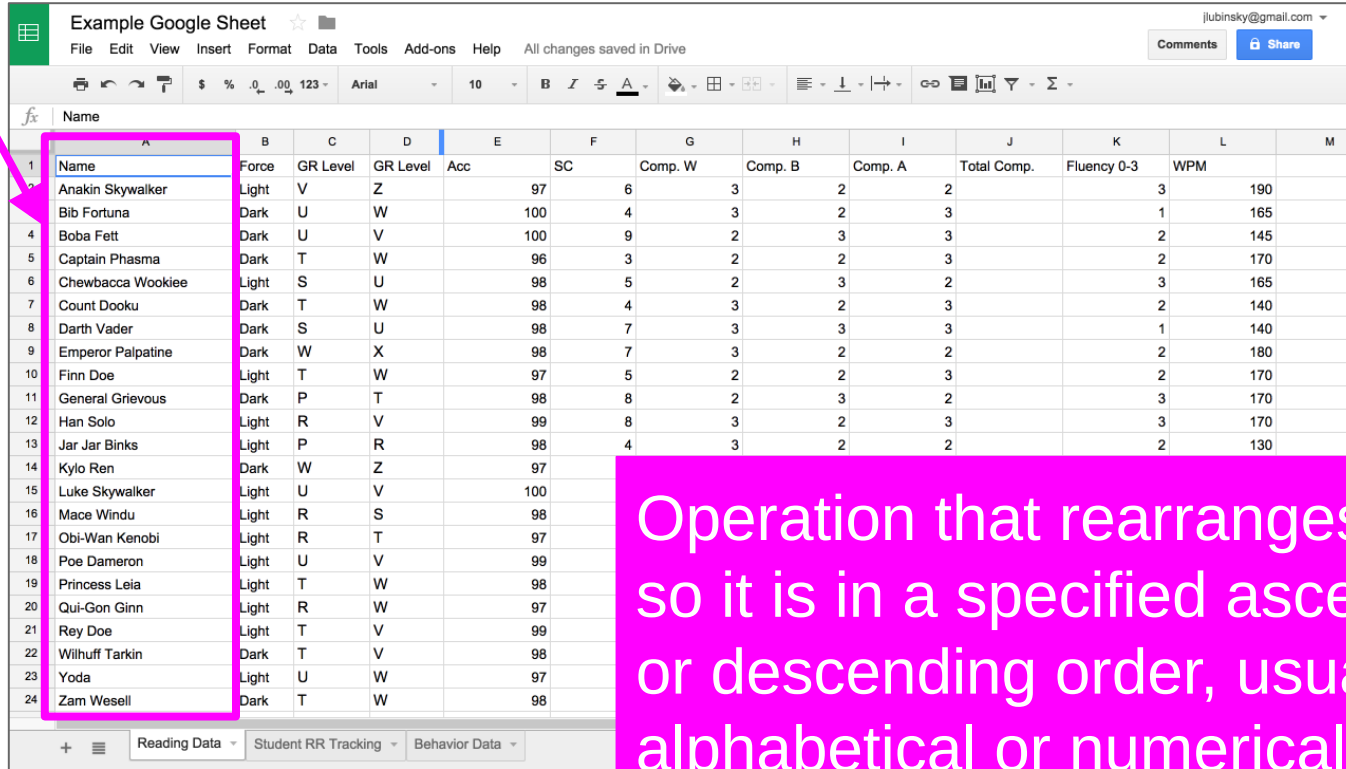
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Name	Force	GR Level	GR Level	Acc	SC	Comp. W	Comp. B	Comp. A	Total Comp.	Fluency 0-3	WPM	
2	Count Dooku	Dark	T	W	98	4	3	2	3		2	140	
3	Rey Doe	Light	T	V	99	6	3	3	2		3	175	
4	Kylo Ren	Dark	W	Z	97	8	3	2	2		3	215	
5	Jar Jar Binks	Light	P	R	98	4	3	2	2		2	130	
6	Obi-Wan Kenobi	Light	R	T	97	7	3	2	3		2	150	
7	Poe Dameron	Light	U	V	99	3	2	3	2		2	150	
8	Captain Phasma	Dark	T	W	96	3	2	2	2		2	170	
9	Chewbacca Wookiee	Light	S	U	98	5	2	3	2	2.375	3	165	
10	Finn Doe	Light	T	W	97	5	2	2	2		2	170	
11	Wilhuff Tarkin	Dark											
12	Anakin Skywalker	Light											
13	Boba Fett	Dark											
14	Darth Vader	Dark											
15	Emperor Palpatine	Dark											
16	General Grievous	Dark											
17	Han Solo	Light											
18	Luke Skywalker	Light											
19	Mace Windu	Light											
20	Princess Leia	Light											
21	Qui-Gon Ginn	Light											
22	Bib Fortuna	Dark											
23	Yoda	Light											
24	Zam Wesell	Dark											

Reading Data

Equation consisting of numbers, cell names, and mathematical symbols in order to perform a mathematical operation. The result of the formula is displayed in the cell that holds the formula.

# Sheets Vocabulary

# Sort



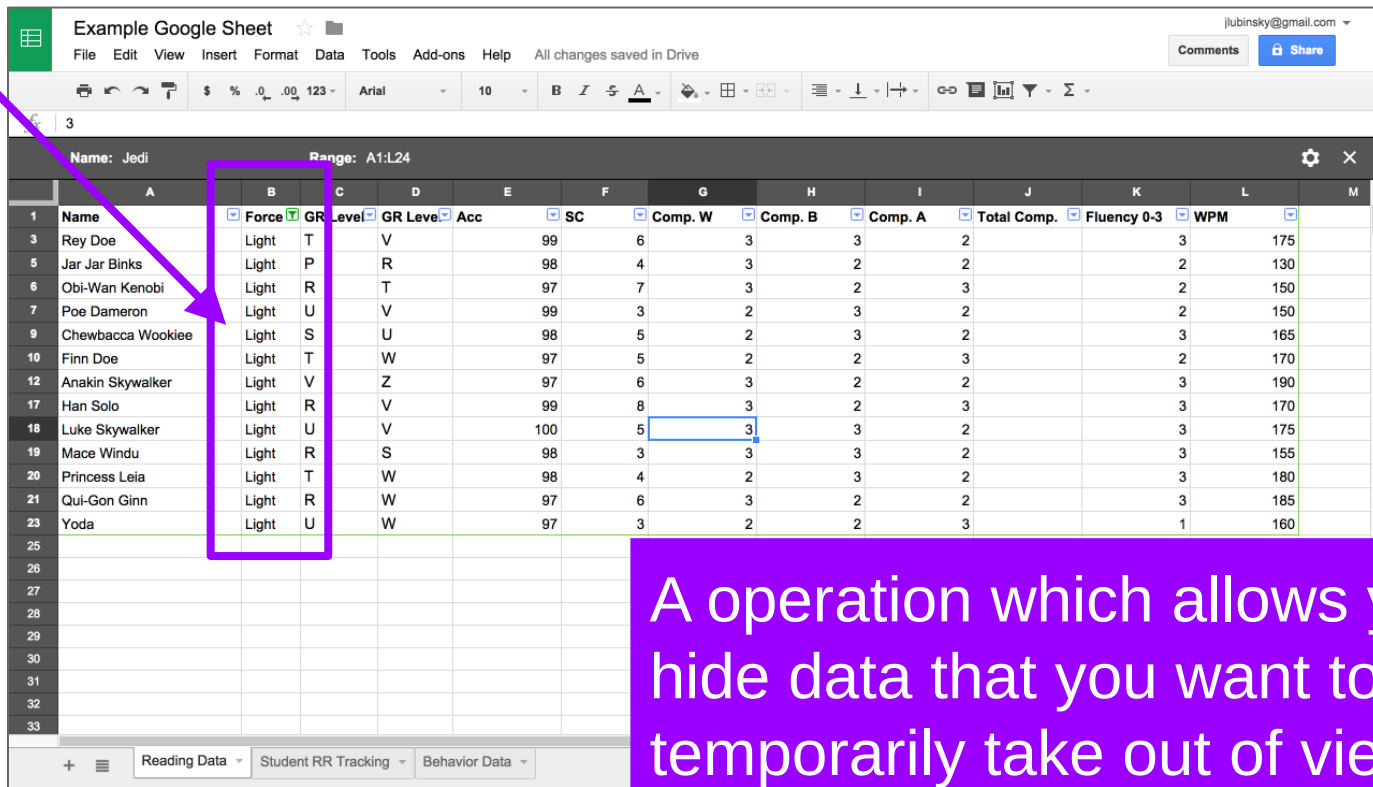
The screenshot shows a Google Sheet with the following data:

Name	Force	GR Level	GR Level	Acc	SC	Comp. W	Comp. B	Comp. A	Total Comp.	Fluency 0-3	WPM
Anakin Skywalker	Light	V	Z	97	6	3	2	2		3	190
Bib Fortuna	Dark	U	W	100	4	3	2	3		1	165
Boba Fett	Dark	U	V	100	9	2	3	3		2	145
Captain Phasma	Dark	T	W	96	3	2	2	3		2	170
Chewbacca Wookiee	Light	S	U	98	5	2	3	2		3	165
Count Dooku	Dark	T	W	98	4	3	2	3		2	140
Darth Vader	Dark	S	U	98	7	3	3	3		1	140
Emperor Palpatine	Dark	W	X	98	7	3	2	2		2	180
Finn Doe	Light	T	W	97	5	2	2	3		2	170
General Grievous	Dark	P	T	98	8	2	3	2		3	170
Han Solo	Light	R	V	99	8	3	2	3		3	170
Jar Jar Binks	Light	P	R	98	4	3	2	2		2	130
Kylo Ren	Dark	W	Z	97							
Luke Skywalker	Light	U	V	100							
Mace Windu	Light	R	S	98							
Obi-Wan Kenobi	Light	R	T	97							
Poe Dameron	Light	U	V	99							
Princess Leia	Light	T	W	98							
Qui-Gon Jinn	Light	R	W	97							
Rey Doe	Light	T	V	99							
Wilhuff Tarkin	Dark	T	V	98							
Yoda	Light	U	W	97							
Zam Wesell	Dark	T	W	98							

Operation that rearranges data so it is in a specified ascending or descending order, usually alphabetical or numerical.

# Sheets Vocabulary

## Filter



The screenshot shows a Google Sheet with a table of Jedi data. The table has columns: Name, Force, GR Level, GR Level, Acc, SC, Comp. W, Comp. B, Comp. A, Total Comp., Fluency 0-3, and WPM. The 'Force' column is highlighted with a purple box, and a purple arrow points to it from the word 'Filter'.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Name	Force	GR Level	GR Level	Acc	SC	Comp. W	Comp. B	Comp. A	Total Comp.	Fluency 0-3	WPM	
3	Rey Doe	Light	T	V	99	6	3	3	2		3	175	
5	Jar Jar Binks	Light	P	R	98	4	3	2	2		2	130	
6	Obi-Wan Kenobi	Light	R	T	97	7	3	2	3		2	150	
7	Poe Dameron	Light	U	V	99	3	2	3	2		2	150	
9	Chewbacca Wookiee	Light	S	U	98	5	2	3	2		3	165	
10	Finn Doe	Light	T	W	97	5	2	2	3		2	170	
12	Anakin Skywalker	Light	V	Z	97	6	3	2	2		3	190	
17	Han Solo	Light	R	V	99	8	3	2	3		3	170	
18	Luke Skywalker	Light	U	V	100	5	3	3	2		3	175	
19	Mace Windu	Light	R	S	98	3	3	3	2		3	155	
20	Princess Leia	Light	T	W	98	4	2	3	2		3	180	
21	Qui-Gon Ginn	Light	R	W	97	6	3	2	2		3	185	
23	Yoda	Light	U	W	97	3	2	2	3		1	160	
25													
26													
27													
28													
29													
30													
31													
32													
33													

A operation which allows you  
hide data that you want to  
temporarily take out of view.



## Level 1: Death Star I (Basic Tips & Tricks)



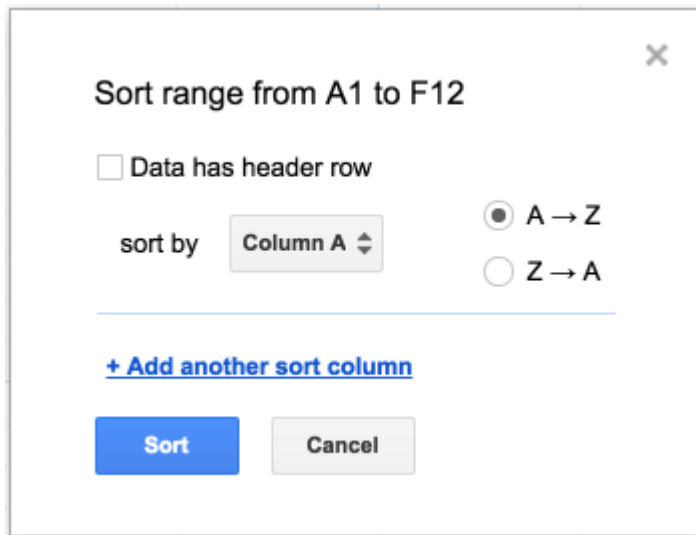
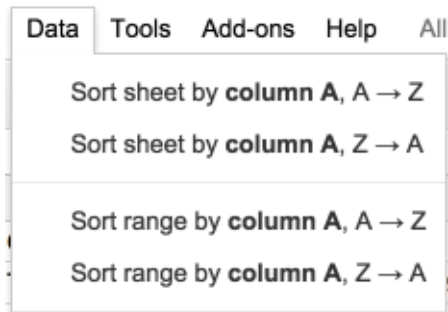
*"That's no moon. It's a space station." - Obi Wan Kenobi*



# Sorting

Sorting can be done in several ways:

- Using the arrow next to the column header
- Using the **Data** menu
- Choosing Sort range underneath the **Data** menu



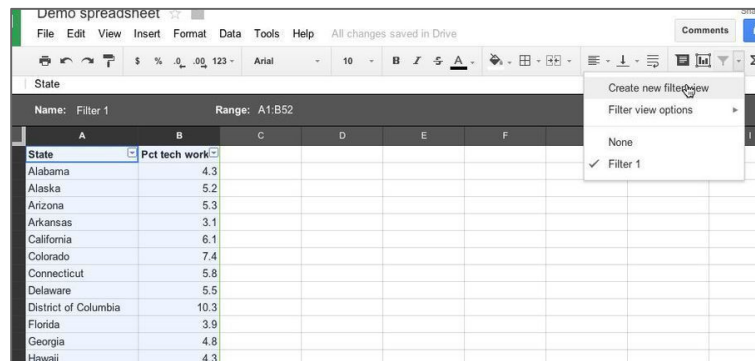
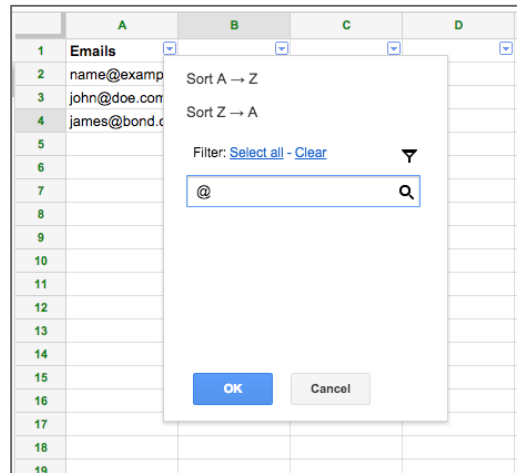
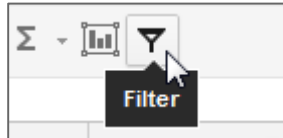




# Filtering

Filtering can be done in several ways as well:

- Using the **Data** menu and choosing Filter or clicking the Filter button on the toolbar
- Creating custom Filter views under the **Data** menu





## The Importance of Planning



# Data Validation

With [data validation](#), you can restrict the values entered into a cell as well as provide warnings for invalid data.

Data

Tools

Form

Add-ons

Help


Sort sheet by **column B**, A → Z

Sort sheet by **column B**, Z → A

Sort range...

Named ranges...

Protected sheets and ranges...

 Filter

Filter views... ▶


Pivot table report...

Validation...

Data validation


✕

Cell range:

Sheet1!B1 

Criteria:

List from a range ▾

'Form Responses'!B2:B 

On invalid data:

☒ Show warning

☐ Reject input

Appearance:

☒ Display in-cell button to show list

☐ Show help:

Click and enter a value from range 'Form Responses'! [Reset](#)

Save

Remove validation

Cancel



# Conditional Formatting

Conditional formatting allows you to have the text or background change color dynamically based on content.

	A	B
1	Paul	79
2	Mary	93
3	Kelly	70
4	Ann	73
5	Victoria	74
6	James	86
7	David	100
8	Janis	98
9	Rodie	78
10	Peter	83
11	Robert	74
12	Mike	86
13	Dan	98
14	Michael	85
15	Richard	93
16	Mark	75

**Conditional format rules** ✕

Single color    Color scale

Apply to range

G6

Format cells if...

Cell is not empty

Formatting style

Default

B I S A

Done Cancel

**Conditional format rules** ✕

Single color    Color scale

Apply to range

G9

Preview

Default

Minpoint

Min value

Midpoint

None

Maxpoint

Max value

Done Cancel

- Cell is empty
- Cell is not empty
- Text contains
- Text does not contain
- Text starts with
- Text ends with
- Text is exactly
- Date is
- Date is before
- Date is after
- Greater than
- Greater than or equal to
- Less than
- Less than or equal to
- Is equal to
- Is not equal to
- Is between
- Is not between
- Custom formula is

# Protect Range

You can [protect a range](#) of cells or an entire sheet of data. Right-click on a cell and you can choose “Protect range...”

**Protected sheets and ranges** ✕

Range

Sheet

'Student RR Tracking'!A2:A22

Set permissions

Cancel

**Protected sheets and ranges** ✕

Range

Sheet

Student RR Tracking

☐ Except certain cells

Set permissions

Cancel

**Protected sheets and ranges** ✕

'Student RR Tracking'!A2:A22

Permissions

Only you can edit this range.

Change permissions

Done

Cancel

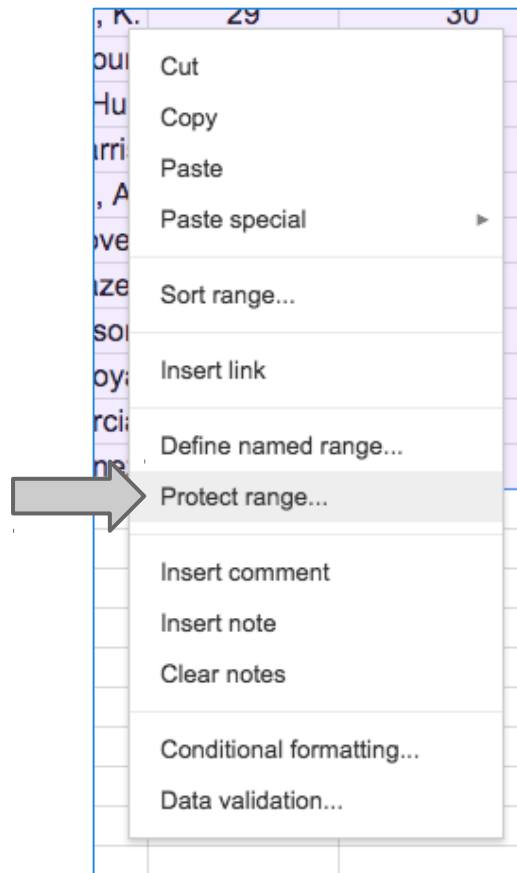
**Range editing permissions** ✕

☐ Show a warning when editing this range

☒ Restrict who can edit this range

Only you

Done

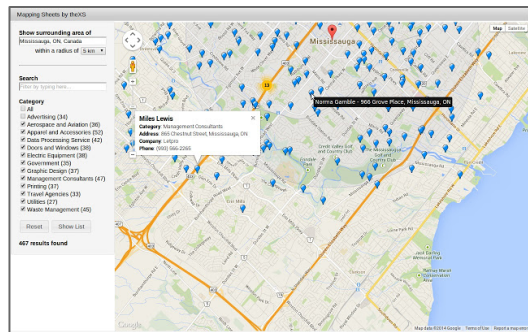




# Mapping Sheets

Mapping Sheets lets you take a list of addresses from Google Sheets and create a Google Map image of those addresses.

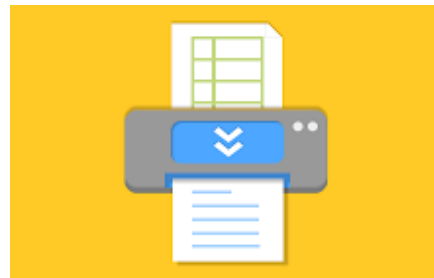
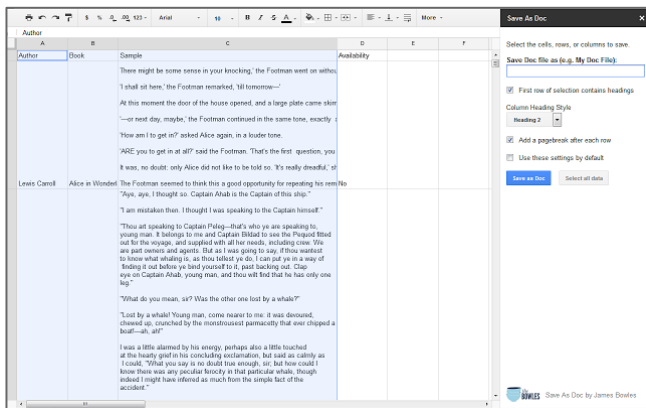
## [Video Walkthrough](#)





# Save As Doc

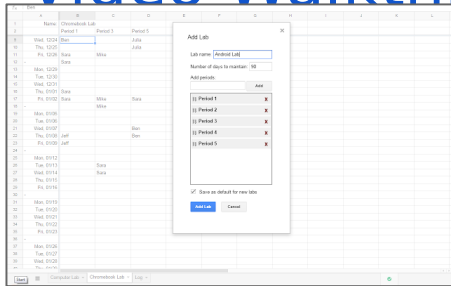
[Save As Doc](#) allows you to convert any Google Sheets spreadsheet into a Google Doc for easy printing or improved readability.



# Lab Scheduler

Lab Scheduler allows schools to easily setup sign-out sheets for resources such as labs and carts. Accommodates changing schedules also.

## Video Walkthrough







## The Power of the Merge

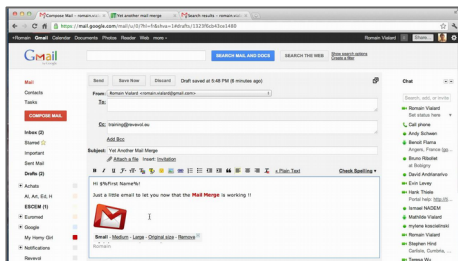


*"We would be honored if you would join us."*  
Darth Vader

# Yet Another Mail Merge

[Yet Another Mail Merge](#) is an incredibly powerful mail merge for use with Gmail. Among best features, you can track who opens messages.

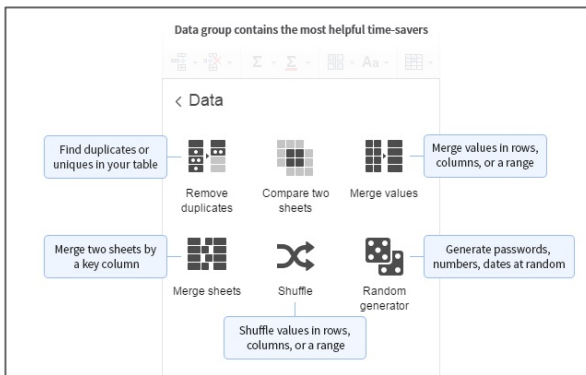
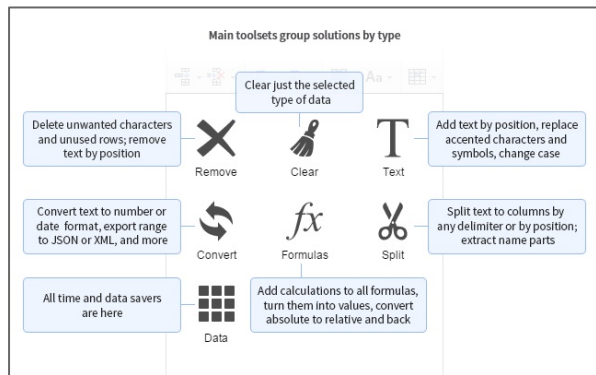
[Video Walkthrough](#)



# Power Tools

Power Tools offers one-click solutions for many tasks: Split cells, remove duplicates, change case, advanced find and replace, formulas, and more.

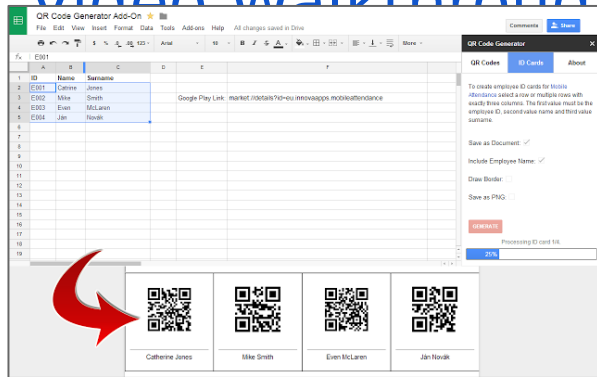
## Video Walkthrough



# QR Code Generator

[QR Code Generator](#) allows you to quickly and easily create QR codes directly from a Google Sheet. Can save codes as one Doc or in PNG files.

## Video Walkthrough





## No Messy Data Allowed!



*"No disintegrations!"  
Darth Vader*

## Remove Blank Rows

Remove Blank Rows will quickly remove all blank rows in a spreadsheet. This eliminates the time needed to parse through a spreadsheet as well as accidental deletions.

[Video Walkthrough](#)





## Level 2: Death Star II (Powering Up)



*"Now witness the firepower of this armed and fully operational battle station!" - Emperor Palpatine*

# Flubaroo

[Flubaroo](#) helps you quickly grade and analyze online assignments and assessments. Shows analytics and emails scores to students.

[Demo](#) ([bit.ly/napastarwars](https://bit.ly/napastarwars))

[Instructions](#)

[Video Walkthrough](#)

[Flubaroo Homepage](#)







## When Powerful Tools Combine



*"Join me and together we can rule the  
galaxy!"*

*Darth Vader*

# Doctopus

Doctopus allows teachers to share, organize, and assess student work in Google Drive through its ability to manage files in Drive. It works beautifully on top of Google Classroom and its integration with [Goobric](#) (a Chrome Extension) adds even more powerful abilities to attach rubrics to student work.

[Doctopus & Goobric Instructions](#)

[Doctopus Video Walkthrough](#)

[Goobric Video Walkthrough](#)

[Doctopus Homepage](#)





## Making “Automagic” from Sheets



*“I will finish...what you started.”*

# Autocrat

[Autocrat](#) lets you take information from a Sheet to automatically populate and create a Google Doc or PDF file.

[Instructions](#)

[Video Walkthrough](#)

[New Visions Homepage](#)





# Fusion Tables

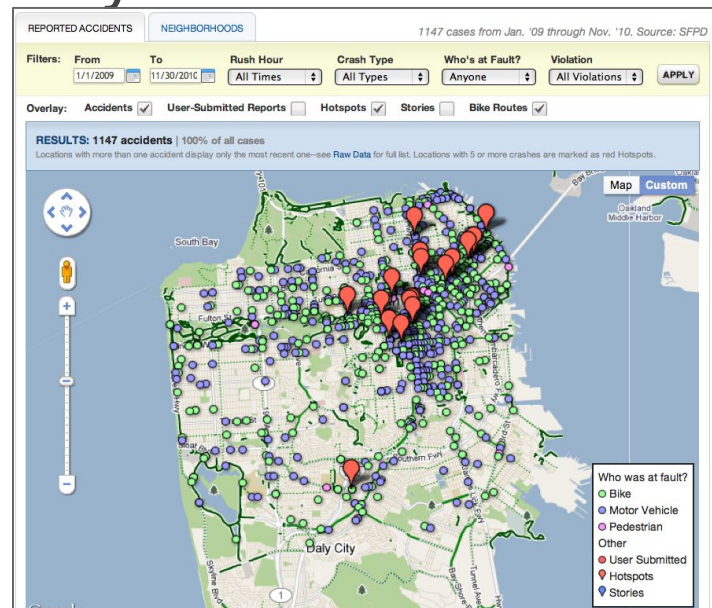
Fusion tables are an amazing way to have your data tell a story visually.

Demo

Student Sample

Video Walkthrough

Example Gallery





# Pivot Tables

Pivot Tables are a function within Google Sheets which allows you to create quick summaries of your data.

Click “Pivot Table” on the **Data** menu to access them.

The screenshot shows a Google Sheets document titled "Sales data by region". A Pivot Table is displayed, summarizing sales data by region (North, South, West) and product type (Copier Sale, Parts, Printer Sale, Service Plan). The Pivot Table is structured with regions in rows and product types in columns. The Report Editor on the right side of the screen shows the configuration for the Pivot Table, including the data range, row and column groupings, and the values to be displayed.

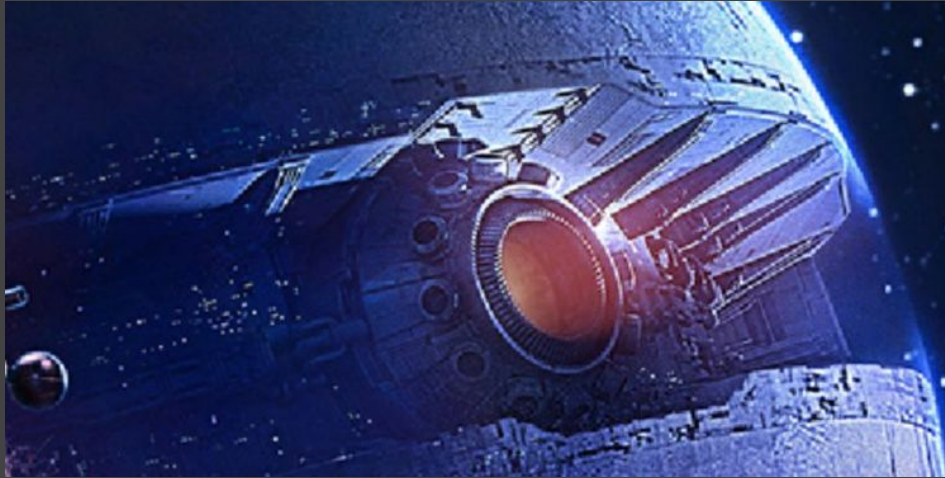
		2003	2004	Grand Total
North	Copier Sale	\$3,063,882	\$3,383,200	\$6,447,082
	Parts	\$3,725,057	\$3,658,572	\$7,383,629
	Printer Sale	\$2,551,451	\$2,943,902	\$5,495,353
	Service Plan	\$21,679,759	\$24,383,922	\$46,063,681
North Total		\$31,020,149	\$34,369,596	\$65,389,745
South	Copier Sale	\$4,557,714	\$4,486,532	\$9,044,246
	Parts	\$4,528,493	\$3,613,765	\$8,142,258
	Printer Sale	\$3,419,102	\$2,904,469	\$6,323,571
	Service Plan	\$25,925,799	\$28,877,856	\$54,803,655
South Total		\$38,431,108	\$39,882,622	\$78,313,730
West	Copier Sale	\$2,488,440	\$3,114,551	\$5,602,991
	Parts	\$2,979,664	\$2,992,985	\$5,972,649
	Printer Sale	\$2,490,071	\$2,403,651	\$4,893,722
	Service Plan	\$18,150,091	\$19,140,178	\$37,290,269
West Total		\$26,108,266	\$27,651,365	\$53,759,631
Grand Total		\$95,559,523	\$101,903,583	\$197,463,106

Report Editor configuration:

- Rows - Add field
  - Group by: Region
  - Sort by: A → Z
  - Show totals
- Columns - Add field
  - Group by: Business Unit
  - Sort by: A → Z
  - Show totals
- Values - Add field
  - Display: Revenue
  - Summarize by: SUM
- Filter - Add field
  - Filter: Business Unit
  - Show: All items



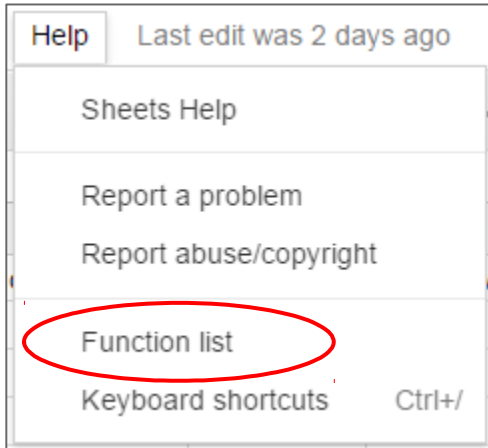
## Level 3: Starkiller Base (Max Power)








*“This fierce machine, upon which we stand, will bring an end to the Senate! To their cherished fleet!” - General Hux*

# Function List

The function list provides you will a comprehensive list of all of the functions that work in Google Sheets.



Type ^	Name		Description
Google	GOOGLETRANSLATE	<code>GOOGLETRANSLATE(text, source_language, target_language)</code>	Translates text from one language into another/ <a href="#">Learn more</a> 
Info	ISURL	<code>ISURL(value)</code>	Checks whether a value is a valid URL. Only available in the <a href="#">new Google Sheets</a>  . <a href="#">Learn more</a> 
Text	PROPER	<code>PROPER(text_to_capitalize)</code>	Capitalizes each word in a specified string. <a href="#">Learn more</a> 
Lookup	VLOOKUP	<code>VLOOKUP(search_key, range, index, is_sorted)</code>	Vertical lookup. Searches down the first column of a range for a key and returns the value of a specified cell in the row found. <a href="#">Learn more</a> 





# IMPORTRANGE

IMPORTRANGE allows users to import a range of cells from another Google Sheets file. Once users are granted permission, any editor on the destination spreadsheet to pull from the source spreadsheet.

=IMPORTRANGE(SpreadsheetKey, 'Form Responses'!B2:B43)

Range of values to  
import

Key of spreadsheet you  
are pulling from



## Sample Key

This Google Slides file's key is:  
1H84G3LHJakIJoyOt9oq65Pzz3  
H712s4ReHSUpuiB8qo

# TRANSPOSE

The [TRANSPOSE](#) function allows you to swap the rows and columns of a range of data.

TRANSPOSE : General Usage				
1	2	3		
4	5	6		
Result		Formula		
1	4	=TRANSPOSE(A11:C12)		
2	5			
3	6			

First and last cell in range, separated by :

=TRANSPOSE('Form Responses'!A11:C12)

Name of the sheet from which you'd like to pull your data

(in single quotes, ending with !)



## Let's Count Stuff



*"Always two there are. No more, no less."*  
Yoda



# COUNTIF

The COUNTIF function will return a value based on the number of times a criterion is met.

The screenshot shows a spreadsheet with the following data:

	A	B	C	D	E
1	Score		Candidates:	13	
2	45		Passes:	7	
3	65				
4	37				
5	71				
6	73				
7	66				

The formula bar shows: `=COUNTIF(A2:A, ">=45")`

COUNTIFS (which allows for multiple criteria) is available in the new Sheets.

**=COUNTIF('Form Responses'!C2:C43,B1)**

Data you'd like  
to count from

Cell that IDs  
the criteria  
for the count

# Counting Functions

The [COUNT](#) function will return the number of values in a range

**=COUNT(C2:C43)**

Range of  
values

The [COUNTBLANK](#) function will return the number of blanks in a range

**=COUNTBLANK(C2:C43)**

Range of  
values

## More Counting Functions

The [COUNTUNIQUE](#) function will return the number of unique values in a range

=COUNTUNIQUE(C2:C43)



Range of  
values

The [COUNTA](#) function will return the number of values in a range

=COUNTA(C2:C43)



Range of  
values



# FILTER

[FILTER](#) will return a filtered version of the source range. The data returned will only contain the rows and columns which meet the specified conditions.

`=FILTER('Form Responses'!A2:G43, 'Form Responses'!B2:B43=B1)`

Data you'd like to filter

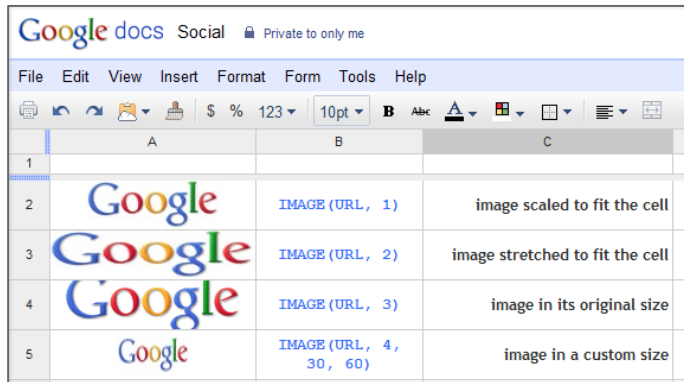
Data you want to use as criteria for filter





Cell that controls the filter



The IMAGE function will allow images to be inserted into cells with several options.

# IMAGE



	A	B	C
1			
2		<code>IMAGE (URL, 1)</code>	image scaled to fit the cell
3		<code>IMAGE (URL, 2)</code>	image stretched to fit the cell
4		<code>IMAGE (URL, 3)</code>	image in its original size
5		<code>IMAGE (URL, 4, 30, 60)</code>	image in a custom size

=IMAGE(URL,mode)

Web address  
of image to  
insert

The following mode options are available:

- 1 (default) - resizes image, maintains aspect ratio
- 2 - compresses image
- 3 - original size, cropped
- 4 - custom size

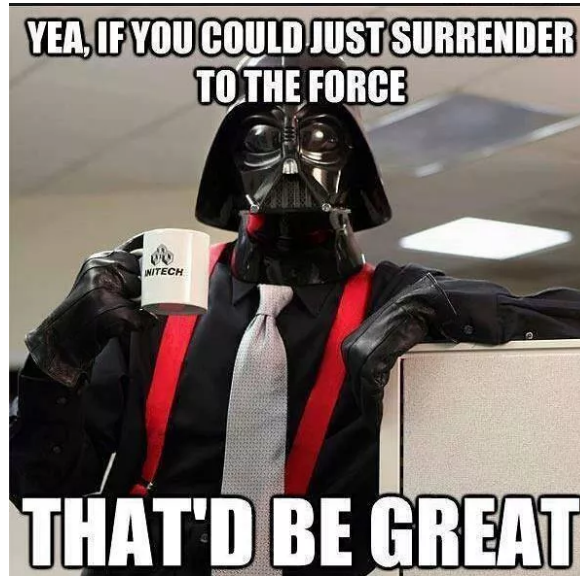


CONGRATULATION  
SI



You are now a Google Sheets  
Jedi Master!

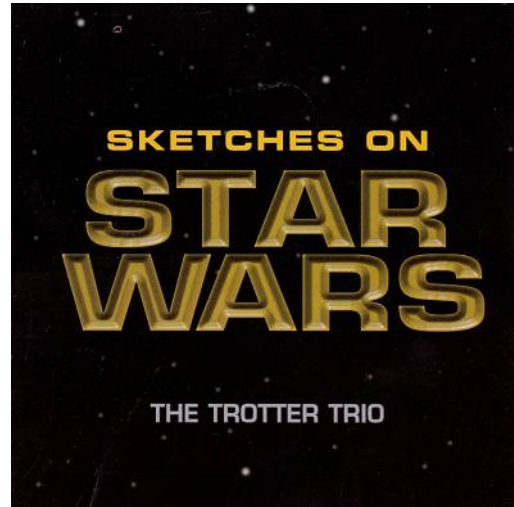
Any Qs?



You can find me:

Twitter/Instagram: [@jlubinsky](#) Email: [jlubinsky@gmail.com](mailto:jlubinsky@gmail.com)

THANKS  
!



Pre-session music: ["Sketches on Star Wars"](#) by The Trotter Trio

# CREDITS

Special thanks to all the Google educators whose work made this presentation possible:

- ▣ Denise “D-Nice” Wills
- ▣ Samantha Morra
- ▣ Josh Harris
- ▣ Dawn Kasperson
- ▣ Brian Scheibach
- ▣ Scott Lotze
- ▣ Nancy Dressel
- ▣ The entire [EdTechTeam](#)!

Presentation template by [SlidesCarnival](#)